

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



550735

(43) International Publication Date
14 October 2004 (14.10.2004)

PCT

(10) International Publication Number
WO 2004/087004 A2

(51) International Patent Classification⁷:

A61F

(74) Agent: COLOPLAST A/S; Att.: Patent Department, Mette Winther Sørensen, Holtedam 1, DK-3050 Humlebaek (DK).

(21) International Application Number:

PCT/DK2004/000203

(22) International Filing Date: 24 March 2004 (24.03.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

PA 2003 00489 31 March 2003 (31.03.2003) DK

(71) Applicant (for all designated States except US): COLOPLAST A/S [DK/DK]; Holtedam 1, DK-3050 Humlebaek (DK).

(72) Inventors; and

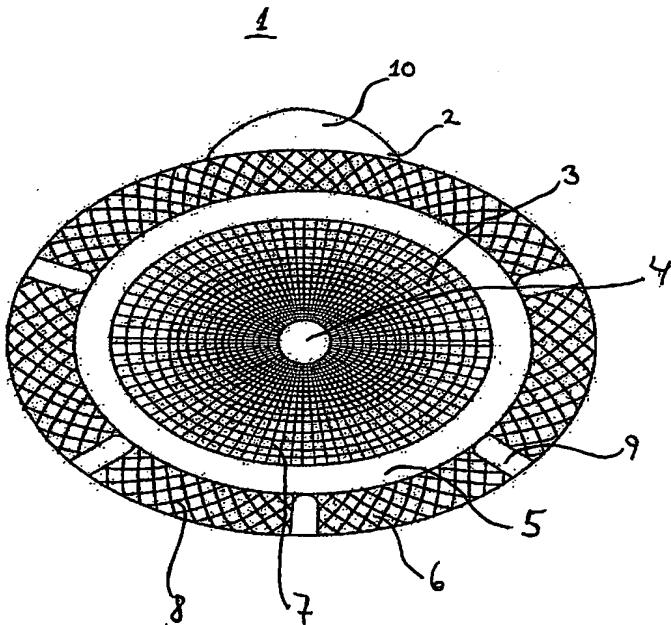
(75) Inventors/Applicants (for US only): OELUND, Jakob [DK/DK]; Egevangen 76, DK-3450 Alleroed (DK). SLETTEN, Carsten [DK/DK]; Svend Poulsens Vej 26, DK-3060 Espergaerde (DK).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: AN ADHESIVE PATCH



WO 2004/087004 A2

(57) Abstract: An adhesive patch for covering a portion of the anatomical surface of a living being, said patch being able to adhere to the skin, and/or a wound on a part of the body, said patch comprising a backing layer and a layer of a skin-friendly adhesive for adhering to the skin, and said patch having a pattern of indentations wherein the indentations are in the form of a pattern of curvilinear indentations shows a flexibility capable of adapting to the contour of a skin surface or a joint that is frequently bent ensuring a snug fit and a safe grip.



Published:

— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

TITLE

An Adhesive Patch

BACKGROUND OF THE INVENTION**5 1. Field of the Invention**

The present invention relates to adhesive patches suitable for use for dressings, such as medical dressings for covering a portion of the anatomical surface of a living being, or, in particular, for use as adhesive barrier member for ostomy appliances, a method for preparing such adhesive patches, and methods of 10 treating a portion of the anatomical surface of a living being, especially a protruding part of the body, and for applying an ostomy appliance comprising such adhesive patch.

In connection with surgery for a number of diseases in the gastro-intestinal or 15 urinary tract a consequence is, in many cases, that the colon, the ileum or the ureter has been exposed surgically and the patient is left with an abdominal stoma, or, in nephrostomy or ureterostomy, the ureter or a catheter is exposed in the back or the chest region or abdominal region, and the effluents or waste products of the body, which are conveyed through these organs, are discharged 20 through the artificial orifice or opening and are collected in a collection bag, which is usually adhered to the skin by means of an adhesive wafer or plate having an inlet opening for accommodating the stoma/ureter/catheter. Also in connection with a fistula, the patient will have to rely on an appliance to collect the bodily material emerging from such opening.

25

Ostomy appliances are well known. Such appliances may be two-piece or one-piece appliances. In both types of appliances, an adhesive barrier member or base plate is attached to the wearer's abdomen/back/chest. In case of a one-piece appliance, a receiving member or bag is attached to the base plate. In case 30 of a two-piece appliance, the adhesive base plate forms part of a body side member and a receiving member or bag is attached releasably to the body side member for receiving exudates from the stoma.

When using one-piece appliances, the whole appliance, including the adhesive skin barrier securing the appliance to the skin is normally removed and replaced by a fresh appliance. When using two-piece appliances, the body side ostomy member is left in place up to several days, and only the receiving member or bag attached to the body side member is replaced.

Conventionally, dressings for the treatment or prevention of wounds or pressure sores or even unbroken skin are essentially flat dressings, which are sufficiently mouldable to be applied to flat or slightly curved areas of the body. Such flat dressings are not very suitable for applying on protruding parts of the body such as joints e.g. heels or especially elbows or knees having not only a very pronounced curvature but also being subject to constant bending which often causes wrinkling and focusing of stresses in the dressing often causing release of the adhesive and unintended detachment of the dressing.

When an ostomy appliance is placed on the abdomen of a user, the bandage has to follow the movements of the skin caused by physical activity as the user would else have a feeling of carrying a very inflexible product, or the appliance might lose its hold of the skin.

The physical activity and change of positions of the user give rise to a bending, stretching, or upsetting of the appliance. The first attack will be concentrated at the borderline between uncovered skin and skin covered by the appliance. When stretching is caused at this borderline, several events/things may happen.

If the appliance is sufficiently flexible, this effect will hardly be noticed by the user. If the flexibility of the appliance is insufficient to take up the stretching, bending and upsetting, and the adhesion to the skin is maintained, the user will notice the effect and will eventually experience a pain or itching under the appliance. If the adhesion to the skin is broken, the appliance will loosen from the skin and eventually cause a leakage.

2. Description of the Related Art

Flexibility of an ostomy appliance may be obtained in several manners. The appliance may be made very thin and having a flexible carrier sheet but a very thin layer of adhesive will due to the low mass not show a sufficient absorbing

5 capacity to uphold an acceptable service time for the appliance. If a high absorbing capacity is desired, the thickness of the adhesive layer may be increased causing a loss of flexibility of the appliance. In this case one way to preserve the flexibility is to provide embossing or indentations in the product providing areas in which the adhesive layer is thinner. The flexibility is then
10 obtained as the thinner areas easier yield on applied forces conserving the absorption capacity of the thicker product.

Thus, WO 93/00056 discloses that a skin-friendly dressing having grooves or ditches fully or partly surrounding a central part of the dressing has a high degree
15 of flexibility.

EP patent No. 0 768 071 discloses a wound dressing especially for use in the sacrum area, said dressing having one or more linear depressions that assist a user in applying, flexing or folding the dressing and that the dressing may have
20 two sets of spaced parallel depressions forming a grid which is useful in the wound assessment. The thickness of the adhesive layer at the base of the depressions should at least be as great as the thickness of the border portion of the adhesive layer.

25 GB patent No. 1,075,939 discloses an adhesive bandage having a thermoplastic top film provided with embossments in order to allow passage of water vapour through the film.

Published EP patent application No. 0 256 893 discloses a non-adherent

30 dressing comprising a film which contains depressions over the wound contacting area which depressions contain a viscous pharmaceutical composition which is

suitable for topical application. The depressions may be in the form of a pattern of conical depressions.

GB patent No. 1,075,939 and EP patent application No. 0 256 893 are silent with
5 respect to flexibility.

WO 99/36017 discloses a dressing comprising a substantially water-impervious layer and a skin-friendly adhesive having a pattern of indentations, which diminishes or disappears when the dressing is moisturised. The grooves are
10 stated to have a depth of at least 25% and more preferred at least 50% of the thickness of the dressing and it is stated that the pattern may increase the flexibility of the dressing.

The publications do not disclose the problems associated with formation of
15 wrinkles or folds during use of a wound dressing or an ostomy appliance, which may lead to formation of canals causing risk of leaking of obnoxious smells or soiling from aggressive exudates.

Furthermore, it has been found that the flexibility of a dressing or adhesive barrier
20 member of an ostomy appliance is important, with respect to the shape, the size and the adhesive of the dressing, not only in use but also during the application. When applying a dressing on a joint that is frequently bent, or when applying an ostomy appliance to an uneven or folded abdomen, flexibility becomes very
25 important as the dressing or ostomy appliance must be able to adapt to the contour of the skin surface.

SUMMARY OF THE INVENTION

The invention relates to an adhesive patch for covering a portion of the anatomical surface of a living being, said patch being able to adhere to the skin,
30 and/or a wound on a part of the body, said patch comprising a backing layer and a layer of a skin-friendly adhesive for adhering to the skin, and said patch having a pattern of indentations.

The invention also relates to an ostomy appliance comprising an adhesive patch for covering a portion of the anatomical surface of a living being, said patch being able to adhere to the skin, and/or a wound on a part of the body, said patch
5 comprising a backing layer and a layer of a skin-friendly adhesive for adhering to the skin, and said patch having a pattern of indentations.

Furthermore, the invention relates to a wound dressing comprising an adhesive patch for covering a portion of the anatomical surface of a living being, said patch
10 being able to adhere to the skin, and/or a wound on a part of the body, said patch comprising a backing layer and a layer of a skin-friendly adhesive for adhering to the skin, and said patch having a pattern of indentations.

The invention also relates to a method for preparing a dressing comprising a
15 backing layer and a layer of a skin-friendly adhesive for adhering to the skin, which dressing has a pattern of indentations.

Still further, the invention relates to a method of treating a portion of the anatomical surface of a living being, especially a protruding part of the body.

20 Yet further, the invention relates to a method for applying an ostomy body side member or a one-piece ostomy appliance comprising an adhesive patch for covering a portion of the anatomical surface of a living being, said patch being able to adhere to the skin, around a stoma, said patch comprising a backing layer
25 and a layer of a skin-friendly adhesive for adhering to the skin, and said patch having a pattern of indentations.

Brief Description of the Drawings

The invention is disclosed more in detail with reference to the drawings showing
30 an embodiment of an adhesive patch of the invention.

Detailed Description of the Present Invention

The present invention relates to an adhesive patch for covering a portion of the anatomical surface of a living being, said patch being able to adhere to the skin, and/or a wound on a part of the body, said patch comprising a backing layer and

5 a layer of a skin-friendly adhesive for adhering to the skin, and the patch further comprising a first central area of a relatively high thickness, a second area surrounding the first area, and a third edge area surrounding the second area, said third area has a pattern of indentations, wherein the indentations are in the form of a pattern of curvilinear indentations.

10

It is preferred that the indentations do not form angles with the border of the patch of 90° and 180°.

15 An adhesive patch comprising a network of indentations in which the lines form angles with the border of the patch of 90° and 180°, respectively, provides a flexible structure, but an attack by a force perpendicular to the border could relatively easily produce a bend perpendicular to the border, which may cause the patch to loosen. This effect is counteracted by the curvilinear indentations present in the border area of a patch of the invention wherein the indentations do 20 not form angles with the border of the patch of 90° and 180°.

In one embodiment of the invention, the patch comprises a first central area of a relatively high thickness; a second area surrounding the first area, and a third edge area surrounding the second area wherein the first area is provided with a 25 pattern of indentations and the third area is provided with a pattern of curvilinear indentations. In this embodiment, the second area may assist in stopping the propagation of wrinkles or folds from the edge or from a centre hole of the patch.

30 In another embodiment of the invention the indentations in the first area comprises a set of "radial" indentations providing flexibility perpendicular to the indentations. The term "radial" as used in the present context is intended not only to comprise directions from the centre of a circle towards the periphery but also to

comprise not crossing directions from a central part of e.g. an ellipse or another closed figure towards the periphery thereof.

In a further embodiment the first area comprises set of indentations encircling the central part. Indentations of this kind are preferably present together with and crossing a set of radial indentations and provide providing a markedly increased flexibility in the central area of the patch and counteracts a stiffening or enforcing effect provided by a set of radial indentations.

5 In a further embodiment of the invention wherein the indentations in the third area are in the form of two or more series of curvilinear indentations crossing each other a very high degree of flexibility is obtained in the border area between free skin and neighbouring skin covered by the patch and furthermore does not provide straight lines facilitating the progressing of a wrinkle or fold. This

10 embodiment is believed rather to deflect such progressing wrinkles or folds reducing the risk of causing a leak.

In yet a further embodiment the indentations are in the form of grooves having a level bottom. The presence of a level bottom of the indentations improves the

15 flexibility and capacity for taking up propagating wrinkles or folds in a level where the damage caused by the wrinkles or folds is kept barely noticeable and also to be able to absorb the effect of larger folds.

It has been found suitable when the width of the indentations, is in the magnitude

20 of from about 0.5 to about 3 millimetres, e.g. 1-2 millimetres, suitably 1.2 millimetres providing a suitable flexibility. It is suitable when the width of a level at the bottom of the indentations is of the same order of magnitude as the stated for the width above.

25 30 In order to ensure a suitable flexibility of the patch it is preferred that the indentations have depth of at least two thirds of the total thickness of the patch. In accordance with a preferred embodiment the indentations have depth of at

least 75% of the total thickness of the patch, more preferred up to 90% and even exceeding 90% of the total thickness of the patch. Thus, the patch may be considered as a number of thick parts connected by thinner bridging parts. The bridging parts are preferably sufficiently large and present in a sufficient number

5 to allow stress originated from movement to be relaxed without proceeding from one thick part to the next.

The curvilinear indentations, when the patch of the invention is seen from above, may suitably be defined by a mathematical function of second or higher order or

10 a hyperbolic function. Such functions give rise to curvilinear patterns such as circles or super-circles, ellipses or super-ellipses, hyperboles and parables or parts thereof.

In a suitable embodiment of the invention the third area is provided with radial zones having a thickness comparable with the thickness of the material in the bottom of the indentations in the third area. Such zones are suitably without indentations. The presence of such zones at the border of the patch provides folding zones capable of absorbing a local high degree of bending caused e.g. when an ostomate is in sitting position and thus prolong the service time of the

15 patch.

20

In one embodiment the invention relates to an ostomy appliance comprising an adhesive patch of the invention, said patch being able to adhere to the skin, said patch comprising a backing layer and a layer of a skin-friendly adhesive for

25 adhering to the skin, and said patch having a pattern of indentations wherein the patch comprises a first central area of a relatively high thickness and a hole for accommodating a stoma, a second area surrounding the first area for attaching a collecting bag or a coupling device, and a third edge area surrounding the second area, wherein the first and third areas are provided with indentations and

30 wherein the indentations in the third area are in the form of a pattern of curvilinear indentations.

An ostomy appliance according to the invention may be in the form of a body side member or in the form of a one-piece ostomy appliance comprising an adhesive patch of the invention. A body side member comprises a coupling means known per se for releasable attachment of a receiving bag.

5

A skin-friendly adhesive may be any skin-friendly adhesive known per se, e.g. an adhesive comprising hydrocolloids or other moisture absorbing constituents for prolonging the time of use. The adhesive may e.g. be of the type disclosed in those disclosed in US patent Nos. 4,367,732, 5,051,259, 5,714,225, 6,171,594,

10 6,303,700, 6,451,883, or 6,437,038, or in WO Application Nos. 00/54820, or 01/05340.

A protective cover or release liner may for instance be siliconized paper. It does not need to have the same contour as the patch, e.g. a number of patches may 15 be attached to a larger sheet of protective cover. The protective cover is not present during the use of the patch of the invention and is therefore not an essential part of the invention.

The outer periphery of a patch of the invention is preferably bevelled in analogy 20 with the disclosure of US Patent No. 4,867,748 or US patent No. 5,133,821 in order to reduce the risk of "rolling-up" the edge of the dressing reducing the wear-time. The edge is preferably bevelled so that the thickness adjacent to the edge does not exceed about 30% of the maximum thickness of the dressing; more preferred not exceeding 25% of the maximum thickness.

25

A coupling means may be any system known per se for attaching receiving bags to ostomy body side members and may suitably be matching coupling rings of the type disclosed in WO 93/18725, WO 94/18919, WO 91/01118, WO 91/01119 or matching flanges for adhesive connection of the type disclosed in U.S. Patent No. 30 5,800,415, WO 00/30576, or WO 01/54632.

A collection bag may be made in analogy with and from materials conventionally used for the preparation of ostomy appliances. Such materials are suitably films composed of any suitable material, which is heat sealable and sufficiently impervious for unpleasant odours such as polyolefin films or combinations of

5 such films, e.g. polyethylene or a co-extrudate of polyethylene and polyvinylidene chloride. Suitably the bag is made from front and rear walls welded in a manner known per se along the rim forming a bag. When cutting or punching the walls, an opening for receiving a stoma is suitably also punched in the wall to form the rear wall.

10

A collecting bag or a coupling device may be attached to the second zone using an adhesive or by welding in a manner known per se.

In another embodiment, the invention relates to a wound dressing comprising an adhesive patch of the invention, said patch being able to adhere to the skin, said patch comprising a backing layer and a layer of a skin-friendly adhesive for adhering to the skin, and said patch having a pattern of indentations wherein the patch comprises a first central area of a relatively high thickness, optionally a second area surrounding the first area, and a third edge area surrounding the

15 first or second area, wherein the first and third areas are provided with indentations and wherein the indentations in the third area are in the form of a pattern of curvilinear indentations.

20

A wound dressing of the invention may in one embodiment of the invention be in the form of a mono-phase adhesive, i.e. made from one adhesive component or in accordance with another embodiment of the invention be in the form of a two-zone adhesive, e.g. of the general type disclosed in US patent No. 5,714,225, i.e. a part of or all of the adhesive areas of the dressing being constituted by more than one type of adhesive.

30

The backing layer may be made from any suitable thermoplastic material known per se for use in the preparation of wound dressings or ostomy appliances e.g.

foam, a non-woven layer or a polyurethane, polyethylene, polyester or polyamide suitable for attachment of a collecting bag or coupling means using an adhesive or by welding.

- 5 The backing layer of the patch may e.g. be a water impervious layer or film may be of any suitable material known per se for use in the preparation of wound dressings e.g. a foam, a non-woven layer or a polyurethane, polyethylene, polyester or polyamide film. In accordance with the invention it has been found in practice that when using a thinner backing layer or film than is normally used
- 10 when preparing medical dressings, an improved stretchability and adaptability is obtained at the same time as the modulus is reduced. These properties are obtained using the same load of adhesive as is conventionally used, and thus, the conventional properties of the adhesive are retained as opposed to the case in which the load of adhesive was lowered giving a risk of insufficient absorbing
- 15 capacity.

The water impervious layer or film is preferably a low-friction flexible polymer film reducing the risk of unwanted stress in an exposed area. A suitable material for use as water impervious layer is a film conventionally used as backing layer in
20 the preparation of wound dressings, suitably having a thickness of about 30 microns.

An especially suitable material for use as a water impervious film is a polyurethane film. A preferred low friction film material is disclosed in US patent
25 No. 5,643,187.

A dressing of the invention may preferably be sterilised for avoiding the risk of causing infections when applied to skin areas having broken skin.

- 30 The invention also relates to a method for preparing an adhesive patch for covering a portion of the anatomical surface of a living being, said patch comprising a backing layer and a layer of a skin-friendly adhesive for adhering to

the skin, and said patch having a pattern of indentations wherein the indentations are in the form of a pattern of curvilinear indentations, which method comprises providing a supply of patches comprising a backing layer and a layer of skin friendly adhesive, placing the patches in a press together with a mould having a

5 surface corresponding to the desired pattern of indentations and providing a sufficient pressure to provide the desired pattern of indentations. The method may be carried out in a manner known per se and may be carried out in a stepwise manner or in a continuous manner as found appropriate. The materials for making a mould and the process conditions may be established by the skilled

10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 120 125 130 135 140 145 150 155 160 165 170 175 180 185 190 195 200 205 210 215 220 225 230 235 240 245 250 255 260 265 270 275 280 285 290 295 300 305 310 315 320 325 330 335 340 345 350 355 360 365 370 375 380 385 390 395 400 405 410 415 420 425 430 435 440 445 450 455 460 465 470 475 480 485 490 495 500 505 510 515 520 525 530 535 540 545 550 555 560 565 570 575 580 585 590 595 600 605 610 615 620 625 630 635 640 645 650 655 660 665 670 675 680 685 690 695 700 705 710 715 720 725 730 735 740 745 750 755 760 765 770 775 780 785 790 795 800 805 810 815 820 825 830 835 840 845 850 855 860 865 870 875 880 885 890 895 900 905 910 915 920 925 930 935 940 945 950 955 960 965 970 975 980 985 990 995 1000 1005 1010 1015 1020 1025 1030 1035 1040 1045 1050 1055 1060 1065 1070 1075 1080 1085 1090 1095 1100 1105 1110 1115 1120 1125 1130 1135 1140 1145 1150 1155 1160 1165 1170 1175 1180 1185 1190 1195 1200 1205 1210 1215 1220 1225 1230 1235 1240 1245 1250 1255 1260 1265 1270 1275 1280 1285 1290 1295 1300 1305 1310 1315 1320 1325 1330 1335 1340 1345 1350 1355 1360 1365 1370 1375 1380 1385 1390 1395 1400 1405 1410 1415 1420 1425 1430 1435 1440 1445 1450 1455 1460 1465 1470 1475 1480 1485 1490 1495 1500 1505 1510 1515 1520 1525 1530 1535 1540 1545 1550 1555 1560 1565 1570 1575 1580 1585 1590 1595 1600 1605 1610 1615 1620 1625 1630 1635 1640 1645 1650 1655 1660 1665 1670 1675 1680 1685 1690 1695 1700 1705 1710 1715 1720 1725 1730 1735 1740 1745 1750 1755 1760 1765 1770 1775 1780 1785 1790 1795 1800 1805 1810 1815 1820 1825 1830 1835 1840 1845 1850 1855 1860 1865 1870 1875 1880 1885 1890 1895 1900 1905 1910 1915 1920 1925 1930 1935 1940 1945 1950 1955 1960 1965 1970 1975 1980 1985 1990 1995 2000 2005 2010 2015 2020 2025 2030 2035 2040 2045 2050 2055 2060 2065 2070 2075 2080 2085 2090 2095 2100 2105 2110 2115 2120 2125 2130 2135 2140 2145 2150 2155 2160 2165 2170 2175 2180 2185 2190 2195 2200 2205 2210 2215 2220 2225 2230 2235 2240 2245 2250 2255 2260 2265 2270 2275 2280 2285 2290 2295 2300 2305 2310 2315 2320 2325 2330 2335 2340 2345 2350 2355 2360 2365 2370 2375 2380 2385 2390 2395 2400 2405 2410 2415 2420 2425 2430 2435 2440 2445 2450 2455 2460 2465 2470 2475 2480 2485 2490 2495 2500 2505 2510 2515 2520 2525 2530 2535 2540 2545 2550 2555 2560 2565 2570 2575 2580 2585 2590 2595 2600 2605 2610 2615 2620 2625 2630 2635 2640 2645 2650 2655 2660 2665 2670 2675 2680 2685 2690 2695 2700 2705 2710 2715 2720 2725 2730 2735 2740 2745 2750 2755 2760 2765 2770 2775 2780 2785 2790 2795 2800 2805 2810 2815 2820 2825 2830 2835 2840 2845 2850 2855 2860 2865 2870 2875 2880 2885 2890 2895 2900 2905 2910 2915 2920 2925 2930 2935 2940 2945 2950 2955 2960 2965 2970 2975 2980 2985 2990 2995 3000 3005 3010 3015 3020 3025 3030 3035 3040 3045 3050 3055 3060 3065 3070 3075 3080 3085 3090 3095 3100 3105 3110 3115 3120 3125 3130 3135 3140 3145 3150 3155 3160 3165 3170 3175 3180 3185 3190 3195 3200 3205 3210 3215 3220 3225 3230 3235 3240 3245 3250 3255 3260 3265 3270 3275 3280 3285 3290 3295 3300 3305 3310 3315 3320 3325 3330 3335 3340 3345 3350 3355 3360 3365 3370 3375 3380 3385 3390 3395 3400 3405 3410 3415 3420 3425 3430 3435 3440 3445 3450 3455 3460 3465 3470 3475 3480 3485 3490 3495 3500 3505 3510 3515 3520 3525 3530 3535 3540 3545 3550 3555 3560 3565 3570 3575 3580 3585 3590 3595 3600 3605 3610 3615 3620 3625 3630 3635 3640 3645 3650 3655 3660 3665 3670 3675 3680 3685 3690 3695 3700 3705 3710 3715 3720 3725 3730 3735 3740 3745 3750 3755 3760 3765 3770 3775 3780 3785 3790 3795 3800 3805 3810 3815 3820 3825 3830 3835 3840 3845 3850 3855 3860 3865 3870 3875 3880 3885 3890 3895 3900 3905 3910 3915 3920 3925 3930 3935 3940 3945 3950 3955 3960 3965 3970 3975 3980 3985 3990 3995 4000 4005 4010 4015 4020 4025 4030 4035 4040 4045 4050 4055 4060 4065 4070 4075 4080 4085 4090 4095 4100 4105 4110 4115 4120 4125 4130 4135 4140 4145 4150 4155 4160 4165 4170 4175 4180 4185 4190 4195 4200 4205 4210 4215 4220 4225 4230 4235 4240 4245 4250 4255 4260 4265 4270 4275 4280 4285 4290 4295 4300 4305 4310 4315 4320 4325 4330 4335 4340 4345 4350 4355 4360 4365 4370 4375 4380 4385 4390 4395 4400 4405 4410 4415 4420 4425 4430 4435 4440 4445 4450 4455 4460 4465 4470 4475 4480 4485 4490 4495 4500 4505 4510 4515 4520 4525 4530 4535 4540 4545 4550 4555 4560 4565 4570 4575 4580 4585 4590 4595 4600 4605 4610 4615 4620 4625 4630 4635 4640 4645 4650 4655 4660 4665 4670 4675 4680 4685 4690 4695 4700 4705 4710 4715 4720 4725 4730 4735 4740 4745 4750 4755 4760 4765 4770 4775 4780 4785 4790 4795 4800 4805 4810 4815 4820 4825 4830 4835 4840 4845 4850 4855 4860 4865 4870 4875 4880 4885 4890 4895 4900 4905 4910 4915 4920 4925 4930 4935 4940 4945 4950 4955 4960 4965 4970 4975 4980 4985 4990 4995 5000 5005 5010 5015 5020 5025 5030 5035 5040 5045 5050 5055 5060 5065 5070 5075 5080 5085 5090 5095 5100 5105 5110 5115 5120 5125 5130 5135 5140 5145 5150 5155 5160 5165 5170 5175 5180 5185 5190 5195 5200 5205 5210 5215 5220 5225 5230 5235 5240 5245 5250 5255 5260 5265 5270 5275 5280 5285 5290 5295 5300 5305 5310 5315 5320 5325 5330 5335 5340 5345 5350 5355 5360 5365 5370 5375 5380 5385 5390 5395 5400 5405 5410 5415 5420 5425 5430 5435 5440 5445 5450 5455 5460 5465 5470 5475 5480 5485 5490 5495 5500 5505 5510 5515 5520 5525 5530 5535 5540 5545 5550 5555 5560 5565 5570 5575 5580 5585 5590 5595 5600 5605 5610 5615 5620 5625 5630 5635 5640 5645 5650 5655 5660 5665 5670 5675 5680 5685 5690 5695 5700 5705 5710 5715 5720 5725 5730 5735 5740 5745 5750 5755 5760 5765 5770 5775 5780 5785 5790 5795 5800 5805 5810 5815 5820 5825 5830 5835 5840 5845 5850 5855 5860 5865 5870 5875 5880 5885 5890 5895 5900 5905 5910 5915 5920 5925 5930 5935 5940 5945 5950 5955 5960 5965 5970 5975 5980 5985 5990 5995 6000 6005 6010 6015 6020 6025 6030 6035 6040 6045 6050 6055 6060 6065 6070 6075 6080 6085 6090 6095 6100 6105 6110 6115 6120 6125 6130 6135 6140 6145 6150 6155 6160 6165 6170 6175 6180 6185 6190 6195 6200 6205 6210 6215 6220 6225 6230 6235 6240 6245 6250 6255 6260 6265 6270 6275 6280 6285 6290 6295 6300 6305 6310 6315 6320 6325 6330 6335 6340 6345 6350 6355 6360 6365 6370 6375 6380 6385 6390 6395 6400 6405 6410 6415 6420 6425 6430 6435 6440 6445 6450 6455 6460 6465 6470 6475 6480 6485 6490 6495 6500 6505 6510 6515 6520 6525 6530 6535 6540 6545 6550 6555 6560 6565 6570 6575 6580 6585 6590 6595 6600 6605 6610 6615 6620 6625 6630 6635 6640 6645 6650 6655 6660 6665 6670 6675 6680 6685 6690 6695 6700 6705 6710 6715 6720 6725 6730 6735 6740 6745 6750 6755 6760 6765 6770 6775 6780 6785 6790 6795 6800 6805 6810 6815 6820 6825 6830 6835 6840 6845 6850 6855 6860 6865 6870 6875 6880 6885 6890 6895 6900 6905 6910 6915 6920 6925 6930 6935 6940 6945 6950 6955 6960 6965 6970 6975 6980 6985 6990 6995 7000 7005 7010 7015 7020 7025 7030 7035 7040 7045 7050 7055 7060 7065 7070 7075 7080 7085 7090 7095 7100 7105 7110 7115 7120 7125 7130 7135 7140 7145 7150 7155 7160 7165 7170 7175 7180 7185 7190 7195 7200 7205 7210 7215 7220 7225 7230 7235 7240 7245 7250 7255 7260 7265 7270 7275 7280 7285 7290 7295 7300 7305 7310 7315 7320 7325 7330 7335 7340 7345 7350 7355 7360 7365 7370 7375 7380 7385 7390 7395 7400 7405 7410 7415 7420 7425 7430 7435 7440 7445 7450 7455 7460 7465 7470 7475 7480 7485 7490 7495 7500 7505 7510 7515 7520 7525 7530 7535 7540 7545 7550 7555 7560 7565 7570 7575 7580 7585 7590 7595 7600 7605 7610 7615 7620 7625 7630 7635 7640 7645 7650 7655 7660 7665 7670 7675 7680 7685 7690 7695 7700 7705 7710 7715 7720 7725 7730 7735 7740 7745 7750 7755 7760 7765 7770 7775 7780 7785 7790 7795 7800 7805 7810 7815 7820 7825 7830 7835 7840 7845 7850 7855 7860 7865 7870 7875 7880 7885 7890 7895 7900 7905 7910 7915 7920 7925 7930 7935 7940 7945 7950 7955 7960 7965 7970 7975 7980 7985 7990 7995 8000 8005 8010 8015 8020 8025 8030 8035 8040 8045 8050 8055 8060 8065 8070 8075 8080 8085 8090 8095 8100 8105 8110 8115 8120 8125 8130 8135 8140 8145 8150 8155 8160 8165 8170 8175 8180 8185 8190 8195 8200 8205 8210 8215 8220 8225 8230 8235 8240 8245 8250 8255 8260 8265 8270 8275 8280 8285 8290 8295 8300 8305 8310 8315 8320 8325 8330 8335 8340 8345 8350 8355 8360 8365 8370 8375 8380 8385 8390 8395 8400 8405 8410 8415 8420 8425 8430 8435 8440 8445 8450 8455 8460 8465 8470 8475 8480 8485 8490 8495 8500 8505 8510 8515 8520 8525 8530 8535 8540 8545 8550 8555 8560 8565 8570 8575 8580 8585 8590 8595 8600 8605 8610 8615 8620 8625 8630 8635 8640 8645 8650 8655 8660 8665 8670 8675 8680 8685 8690 8695 8700 8705 8710 8715 8720 8725 8730 8735 8740 8745 8750 8755 8760 8765 8770 8775 8780 8785 8790 8795 8800 8805 8810 8815 8820 8825 8830 8835 8840 8845 8850 8855 8860 8865 8870 8875 8880 8885 8890 8895 8900 8905 8910 8915 8920 8925 8930 8935 8940 8945 8950 8955 8960 8965 8970 8975 8980 8985 8990 8995 9000 9005 9010 9015 9020 9025 9030 9035 9040 9045 9050 9055 9060 9065 9070 9075 9080 9085 9090 9095 9100 9105 9110 9115 9120 9125 9130 9135 9140 9145 9150 9155 9160 9165 9170 9175 9180 9185 9190 9195 9200 9205 9210 9215 9220 9225 9230 9235 9240 9245 9250 9255 9260 9265 9270 9275 9280 9285 9290 9295 9300 9305 9310 9315 9320 9325 9330 9335 9340 9345 9350 9355 9360 9365 9370 9375 9380 9385 9390 9395 9400 9405 9410 9415 9420 9425 9430 9435 9440 9445 9450 9455 9460 9465 9470 9475 9480 9485 9490 9495 9500 9505 9510 9515 9520 9525 9530 9535 9540 9545 9550 9555 9560 9565 9570 9575 9580 9585 9590 9595 9600 9605 9610 9615 9620 9625 9630 9635 9640 9645 9650 9655 9660 9665 9670 9675 9680 9685 9690 9695 9700 9705 9710 9715 9720 9725 9730 9735 9740 9745 9750 9755 9760 9765 9770 9775 9780 9785 9790 9795 9800 9805 9810 9815 9820 9825 9830 9835 9840 9845 9850 9855 9860 9865 9870 9875 9880 9885 9890 9895 9900 9905 9910 9915 9920 9925 9930 9935 9940 9945 9950 9955 9960 9965 9970 9975 9980 9985 9990 9995 9999 10000 10005 10010 10015 10020 10025 10030 10035 10040 10045 10050 10055 10060 10065 10070 10075 10080 10085 10090 10095 10100 10105 10110 10115 10120 10125 10130 10135 10140 10145 10150 10155 10160 10165 10170 10175 10180 10185 10190 10195 10200 10205 10210 10215 10220 10225 10230 10235 10240 10245 10250 10255 10260 10265 10270 10275 10280 10285 10290 10295 10300 10305 10310 10315 10320 10325 10330 10335 10340 10345 10350 10355 10360 10365 10370 10375 10380 10385 10390 10395 10400 10405 10410 10415 10420 10425 10430 10435 10440 10445 10450 10455 10460 10465 10470 10475 10480 10485 10490 10495 10500 10505 10510 10515 10520 10525 10530 10535 10540 10545 10550 10555 10560 10565 10570 10575 10580 10585 10590 10595 10600 10605 10610 10615 10620 10625 10630 10635 10640 10645 10650 10655 10660 10665 10670 10675 10680 10685 10690 10695 10700 10705 10710 10715 10720 10725 10730 10735 10740 10745 10750 10755 10760 10765 10770 10775 10780 10785 10790 10795 10800 10805 10810 10815 10820 10825 10830 10835 10840 10845 10850 10855 10860 10865 10870 10875 10880 10885 10890 10895 10900 10905 10910 10915 10920 10925 10930 10935 10940 10945 10950 10955 10960 10965 10970 10975 10980 10985 10990 10995 10999 11000 11005 11010 11015 11020 11025 11030 11035 11040 11045 11050 11055 11060 11065 11070 11075 11080 11085 11090 1109

pattern of curvilinear indentations and a hole for receiving a stoma, said method comprising locating the stoma, optionally adapting the size of the hole to the stoma, aligning the stoma and the hole of the adhesive patch, placing the body side member or ostomy appliance with the stoma projecting into the hole of the wafer, adapting the curvature of the patch for better fitting the anatomical surface neighbouring the stoma, and bringing the adhesive patch to seal against the abdomen of the ostomate around the stoma.

Description of the Preferred Embodiments

10 The invention is now explained more in detail with reference to the drawings showing a preferred embodiment of the invention.

In the drawings is shown a preferred embodiment of an adhesive patch 1 for use for an ostomy appliance, said patch being able to adhere to the skin, said patch comprising a backing layer 2 and a layer of a skin-friendly adhesive for adhering to the skin, and said patch having a pattern of indentations wherein the patch comprises a first central area 3 of a relatively high thickness and a central hole 4, a second area 5 surrounding the first area for attaching a collecting bag or a coupling device, and a third edge 6 area surrounding the second area, wherein the first and third areas are provided with indentations 7,8 and wherein the indentations 8 in the third area are in the form of a pattern of curvilinear indentations. This embodiment is further provided with radial zones in the third area, said zones 9 having a thickness comparable with the thickness of the material in the bottom of the indentations in the third area and the backing layer 2 is provided with an ear 10 protruding from the rim of the patch for an easy grip.

Claims

1. An adhesive patch for covering a portion of the anatomical surface of a living being, said patch being able to adhere to the skin, and/or a wound on a part of
5 the body, said patch comprising a backing layer and a layer of a skin-friendly adhesive for adhering to the skin, and the patch further comprising a first central area of a relatively high thickness, a second area surrounding the first area, and a third edge area surrounding the second area, said third area has a pattern of indentations, wherein the indentations are in the form of a pattern of curvilinear
10 indentations.
2. A patch as claimed in claim 1 wherein the first area is provided with a pattern of indentations.
- 15 3. A patch as claimed in claim 1 or 2 wherein the pattern of indentations in the first area comprises radial indentations.
4. A patch as claimed in any of claims 1-3 wherein the first area comprises a set of indentations encircling the central part.
20
5. A patch as claimed in any of claims 1-4 wherein the indentations in the third area are in the form of two or more series of curvilinear indentations crossing each other.
- 25 6. A patch as claimed in any of claims 1-5 wherein the indentations are in the form of grooves having a level bottom.
7. A patch as claimed in any of claims 1-6 wherein the curvilinear indentations are defined by a mathematical function of second or higher order or a hyperbolic
30 function.

8. A patch as claimed in any of claims 1-7 wherein the third area is provided with radial zones having a thickness comparable with the thickness of the material in the bottom of the indentations in the third area.

5 9. An ostomy appliance comprising an adhesive patch as claimed in any of claims 1-8, said patch being able to adhere to the skin, said patch comprising a backing layer and a layer of a skin-friendly adhesive for adhering to the skin, and said patch having a pattern of indentations wherein the patch comprises a first central area of a relatively high thickness and a hole, a second area surrounding the first area for attaching a collecting bag or a coupling device, and a third edge area surrounding the second area, wherein the first and third areas are provided with indentations and wherein the indentations in the third area are in the form of a pattern of curvilinear indentations.

10 10. A wound dressing comprising an adhesive patch as claimed in any of claims 1-8, said patch being able to adhere to the skin, said patch comprising a backing layer and a layer of a skin-friendly adhesive for adhering to the skin, and said patch having a pattern of indentations wherein the patch comprises a first central area of a relatively high thickness, optionally a second area surrounding the first area, and a third edge area surrounding the first or second area, wherein the first and third areas are provided with indentations and wherein the indentations in the third area are in the form of a pattern of curvilinear indentations.

15

20

1/1

Fig. 1

